

What is claimed is:

1. A constant velocity universal joint comprising:

a cylindrical outer member connected to a transmission shaft, said outer member having guide grooves separated from each other by a predetermined spacing distance and extending in an axial direction on an inner circumferential surface of said outer member; and

an inner member connected to another transmission shaft, said inner member being inserted into an opening in said outer member, said inner member including trunnions each having a spherical surface and annular members each having a spherical recess adapted to receive said spherical surface,

wherein a cutout surface is formed on a part of said spherical surface of said trunnion, to which no torque is applied.

2. A constant velocity universal joint according to claim 1, wherein said cutout surface comprises a flat surface.

3. A constant velocity universal joint according to claim 2, wherein said cutout surface comprises a pair of opposite flat surfaces.

4. A constant velocity universal joint according to claim 1, wherein said cutout surface comprises a recess or a

bore.

5           5.    A constant velocity universal joint according to  
claim 4, wherein said cutout surface comprises a pair of  
opposite bores.

10           6.    A constant velocity universal joint according to  
claim 1, wherein said cutout surface comprises a flat  
surface separating said spherical surface formed in a  
circumferential direction of said trunnion.

15           7.    A constant velocity universal joint according to  
claim 6, wherein said cutout surface comprises a pair of  
opposite flat surfaces.

20           8.    A constant velocity universal joint according to  
claim 1, wherein said cutout surface comprises a curved  
surface formed in a circumferential direction of trunnion.

25           9.    A constant velocity universal joint according to  
claim 8, wherein said cutout surface comprises a pair of  
opposite curved surfaces.

          10.   A constant velocity universal joint according to  
claim 9, wherein width of said curved surface is decreased  
gradually from a substantially central portion toward both  
ends of said curved surface in said circumferential

direction.

11. A constant velocity universal joint comprising:

5 a cylindrical outer member connected to a transmission shaft, said outer member having guide grooves separated from each other by a predetermined spacing distance and extending in an axial direction on an inner circumferential surface of said outer member; and

10 an inner member connected to another transmission shaft, said inner member being inserted into an opening in said outer member, said inner member including trunnions each having a spherical surface and annular members each having a spherical recess adapted to receive said spherical surface,

15 wherein a pair of cutout surfaces each comprising at least a flat surface, a curved surface, or a composite surface of a flat surface and a curved surface are formed on opposite parts of said spherical surface of said trunnion, to which no torque is applied, and

20 wherein said spherical recess is formed in a perfectly circular opening of said annular member.

12. A constant velocity universal joint comprising:

25 a cylindrical outer member connected to a transmission shaft, said outer member having guide grooves separated from each other by a predetermined spacing distance and extending in an axial direction on an inner circumferential surface of said outer member; and

an inner member connected to another transmission shaft,  
said inner member being inserted into an opening in said  
outer member, said inner member including trunnions each  
having a spherical surface and annular members each having a  
spherical recess adapted to receive said spherical surface,

wherein a substantially disk-shaped head is formed by  
cutting out a part of said spherical surface of said  
trunnion ,

wherein a pair of cutout surfaces each comprising at  
least a flat surface, a curved surface, or a composite  
surface of a flat surface and a curved surface are formed on  
opposite parts of a band-shaped circumferential surface of  
said disk-shaped head of said spherical surface of said  
trunnion, to which no torque is applied, and

wherein said spherical recess is formed in a perfectly  
circular opening of said annular member.

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